DOCUMENT RESUME

ED 112 076 95 CE 004 842

TITLE	Business and Office Career Education Curriculum Project. Final Report.
INSTITUTION	Colorado State Univ., Ft. Collins. Dept. of Vocational Education.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C.
PUB DATE	1 Aug 75
CONTRACT	OEC-0-73-5230
NOTE	43p.; Some illustrations may not reproduce due to smallness of type; The copyrighted appendixes have been removed; For related documents, see CE 004 843-847
EDRS PRICE	MF-$0.76 HC-$1.95 Plus Postage
DESCRIPTORS	*Business Education; *Career Education; *Curriculum Development; Educational Coordination; Elementary Education; Elementary Secondary Education; Information Dissemination; *Material Development; National Programs; Office Occupations Education; Projects; Reports; Secondary Education
IDENTIFIERS	Business and Office Career Education Curriculum; Project BO CEC

ABSTRACT

The document reports on the procedures followed and the major meetings and events in a 24 month U.S. Office of Education project carried out by Colorado State University to develop business and office career education curriculum guides for grades seven-nine. The materials developed were: (1) student learning packets or modules, (2) correlated teachers' manuals, (3) a K-14 curriculum plan and strategy, and (4) a resource list of publishers. (These materials are discussed, but not included, in the document.) A national advisory committee was set up, and directors of career education curriculum projects across the nation helped to establish guidelines for articulation and coordination among projects. Materials and information were solicited from career education projects throughout the United States, from State supervisors of business and office and career education, and from business education supervisors of large cities. The National Symposium for Business and Office Education Curriculum Guidelines was held in Denver in 1973 to inform leaders of the project and to develop and disseminate curriculum guidelines. Cooperating teachers participated in workshops, tested materials (titled resource guides) in their classrooms, and contributed to their revision. In July, 1975, a meeting was held in Denver to disseminate the materials nationally. (AJ)

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FINAL REPORT

AUGUST 1, 1975

Business and Office Career Education Curriculum Project

U.S. Office of Education Grant # OEC-0-73-5230

Harry Huffman, Director

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Department of Vocational Education

Colorado State University

Fort Collins, Colorado

CE 004 842

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BUSINESS AND OFFICE CAREER EDUCATION CURRICULUM PROJECT

Summary of Final Report

Origin And Duration Of Project

The BO-CEC Project was funded by the USOE for 24 months (July 1, 1973 through July 1, 1975 with a time extension to August 30, 1975.) Funds were directed to Colorado State University where Dr. Harry Huffman directed the project. The project monitor was Mr. James H. Wykle, U.S. Office of Education.

Project Staff

The project staff consisted of: Dr. Harry Huffman, CSU, director; Dr. Clyde Welter, Georgia State University, curriculum specialist; Ms. Celestine Mongo, Detroit Public Schools, curriculum specialist; Mr. Bennie Bauman, associate project manager; Mr. Rodney Fleeman, research associate; Ms. Susan Glahn, technical assistant and coordinator; and Ms. Velma Gallagher and Ms. Diane Cheney, technical assistants.

Goals And Objectives

The overall goal of the project was to develop business and office career education curriculum guides for grades 7-9. More specifically, the materials to be delivered were:

(1) Student learning packets or modules
(2) Correlated teachers' manuals
(3) Curriculum plan and strategy for use in K-14
(4) A bibliography of instructional materials

Preparation And Procedures

Dr. Harry Huffman met with directors of career education curriculum projects across the nation to establish guidelines for articulation and coordination among projects. A list of the career education curriculum contractors funded at that time appears in Illustration 1.

Illustration 1

[illegible] CURRICULUM CONTRACTORS

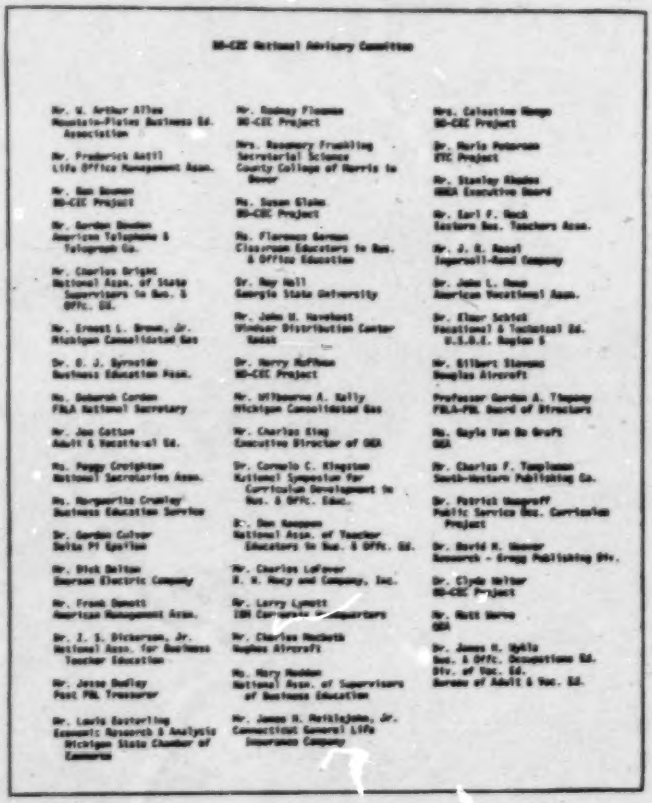
Project	Address of Project Director	State
Construction	William (Bill) Pitz, Dir. Joseph Tekesh Texas Education Agency 201 East 11 [illegible] Austin, TX 78710 (512) 475-[illegible]	Texas
Transportation	Ed Petrie, Assoc. Dir. Div. of Voc. Ed. Ohio Dept. of Ed., Suite 703 Ohio St. Fed. Bldg. 65 East Gay Street Columbus, OH 43215 (614) 466-3430	Ohio
Manufacturing	Dr. Charles Hoffpir, Dir. Cameron Beckman 330 Orange Street Newark, NJ 07102 (201) 648-[illegible] Ext. [illegible]	New Jersey
Communications and Media	Dr. H. Lee Faust, Jr. Director Communications Media Group, Cluster 102 Batcheller Hall, O.S.U. Corvallis, OR 97331 (503) 754-[illegible]	Oregon
Public Service	Dr. Patrick J. Haggerty, Dir. Calif. St. Dept. of Ed. 1025 P Street, Room 210 Sacramento, CA 95814 (916) [illegible]	California
Agri-business and Natural Resources	Roger Staniger Ohio State University Dept. of Agricultural Ed. 208 Agricultural Adm. Bldg. 2120 Fyffe Road Columbus, OH 43210	Ohio
Consumer and Homemaking	Dr. Patricia D. Murphy College of Home Economics North Dakota State University Fargo, ND 58102	North Dakota
Business and Office Education	Dr. Harry Huffman, Professor Business and Office Education Dept. of Vocational Education Colorado State University Fort Collins, CO 80521	Colorado
Marketing and Distribution	Dr. Alice Gordon Contract Research Corporation 20 Mill Street Arlington, MA 02174	Massachusetts

Dr. Huffman identified representatives from businesses, industries, professional organizations, and educational institutions to participate on the national advisory committee of the BO-CEC Project (Illustration 2).

Letters were sent to directors of career education projects throughout the United States informing them of the BO-CEC Project and requesting materials and information about their projects. Letters were also sent to state supervisors of business and office education, to career education

directors of the various states, and to business education supervisors of large cities requesting copies of their curriculum guides and additional career education materials being used in their districts or projects.

Illustration 2



BO-CEC National Advisory Committee

Dr. H. Arthur Allen
Mountain-Plains Business Ed. Association

Dr. Frederick Antil
Life Office Management Assn.

Mr. Ben Bowman
BO-CEC Project

Mr. Gordon Bowden
American Telephone & Telegraph Co.

Mr. Charles Bright
National Assn. of State Supervisors in Bus. & Offc. Ed.

Mr. Ernest L. Brown, Jr.
Michigan Consolidated Gas

Dr. O. J. Byrnside
Business Education Assn.

Ms. Deborah Cordon
FBLA National Secretary

Dr. Joe Cotton
Adult & Vocational Ed.

Ms. Peggy Creighton
National Secretaries Assn.

Ms. Marguerite Crumley
Business Education Service

Dr. Gordon Culver
Delta Pi Epsilon

Mr. Dick Dalton
Emerson Electric Company

Mr. Frank Dewett
American Management Assn.

Dr. J. S. Dickerson, Jr.
National Assn. for Business Teacher Education

Mr. Jesse Dudley
Post Pub. Treasurer

Dr. Lewis Easterling
Economic Research & Analysis
Michigan State Chamber of Commerce

Mr. Rodney Fleenor
BO-CEC Project

Mrs. Rosemary Frushling
Secretarial Science
County College of Morris in Dover

Ms. Susan Glahn
BO-CEC Project

Ms. Florence Gorman
Classroom Educators in Bus. & Office Education

Dr. Ray Hall
Georgia State University

Mr. John H. Havekost
Windsor Distribution Center
Geigy

Dr. Harry Huffman
BO-CEC Project

Mr. Wilbourne A. Kelly
Michigan Consolidated Gas

Mr. Charles King
Executive Director of OEA

Dr. Carmela C. Kingston
National Symposium for Curriculum Development in Bus. & Offc. Educ.

Dr. Don Knepper
National Assn. of Teacher Educators in Bus. & Offc. Ed.

Mr. Charles LaFever
D. H. Macy and Company, Inc.

Mr. Larry Lynott
IBM Corporate Headquarters

Mr. Charles MacBeth
Hughes Aircraft

Ms. Mary Madden
National Assn. of Supervisors of Business Education

Mr. James H. Mattlejohn, Jr.
Connecticut General Life Insurance Company

Mrs. Celestine Mongo
BO-CEC Project

Dr. Maria Peterson
ETC Project

Mr. Stanley Rhodes
NBEA Executive Board

Mr. Earl F. Rock
Eastern Bus. Teachers Assn.

Mr. J. R. Rossi
Ingersoll-Rand Company

Mr. John L. Rowe
American Vocational Assn.

Dr. Elmer Schlet
Vocational & Technical Ed.
U.S.O.E. Region 5

Mr. Gilbert Stevens
Douglas Aircraft

Professor Gordon A. Thayney
FBLA-PBL Board of Directors

Ms. Gayle Van De Graft
OEA

Mr. Charles F. Tompkins
South-Western Publishing Co.

Dr. Patrick Unangst
Public Service Bus. Curriculum Project

Dr. David H. Weaver
Research - Gregg Publishing Div.

Dr. Clyde Walter
BO-CEC Project

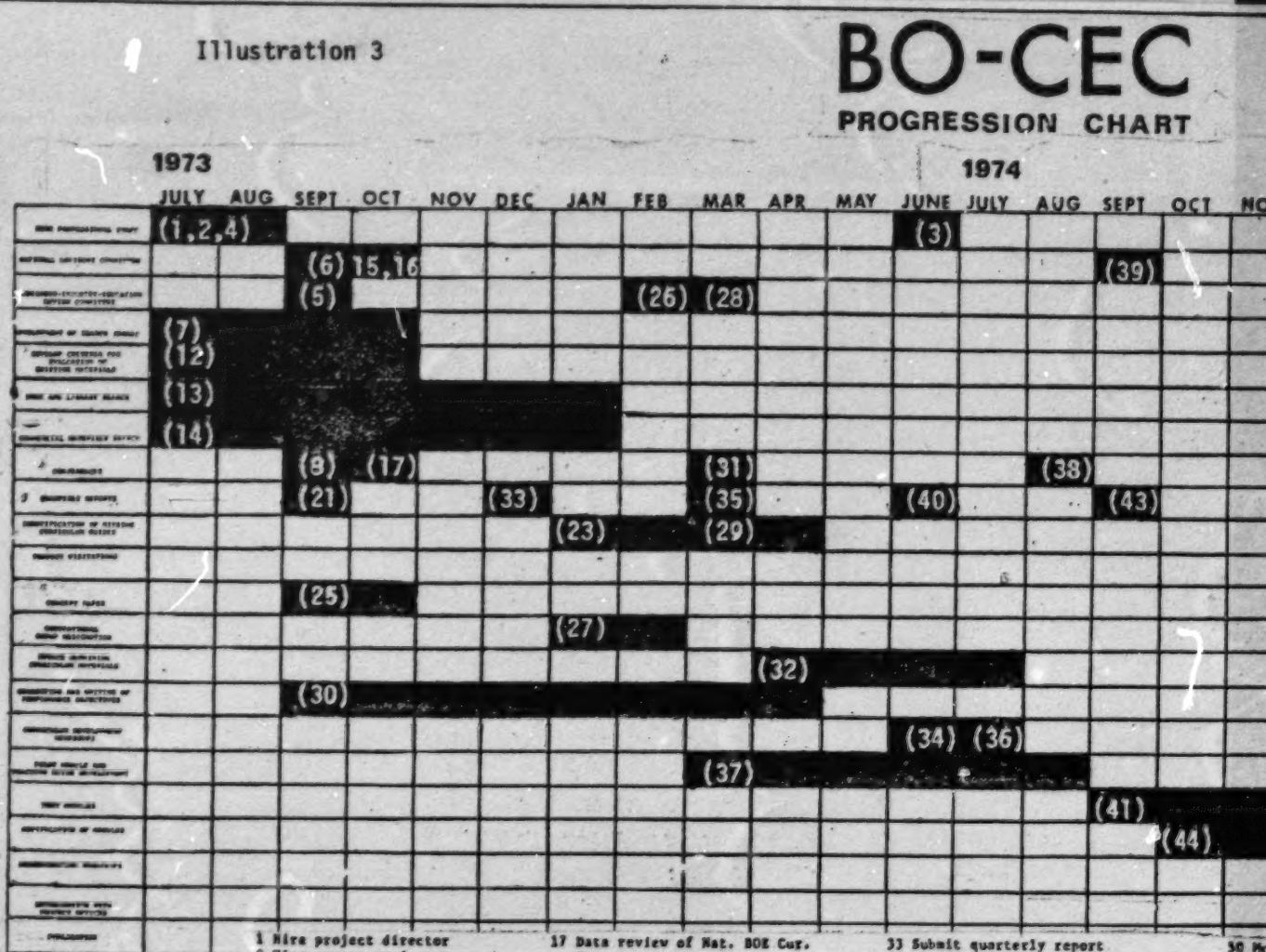
Mr. Walt Werve
OEA

Dr. James H. Wykle
Bus. & Offc. Occupations Ed.
Div. of Voc. Ed.
Bureau of Adult & Voc. Ed.

The National Symposium for Business and Office Education Curriculum Guidelines, directed by Dr. Carmela Kingston, was held at the Denver Hilton Hotel on September 23-26, 1973. The purpose of this symposium was to inform leaders of business and office education about the BO-CEC Project and to develop and disseminate guidelines for the emerging business and office curriculum. At this conference, Dr. Huffman described the purpose and anticipated procedures of the BO-CEC Project and introduced the project staff.

A detailed outline showing the procedures followed and the major events that occurred during the two-year project appears in the BO-CEC Progression Chart (Illustration 3). The curriculum guides, reports, and the most critical meetings and events of the project will be discussed further in the body of this report.

Illustration 3



1 Hire project director
2 Hire assoc. proj. mgr.
3 Hire 7-9 curr. dev. spec.
4 Hire res. assoc. & staff
5 Form BIER Committee
6 Form NAd Committee
7 Develop Search Committee format
8 Nat. Symposium of BOE Curriculum Development
9 Write RCU's
10 Visit K-6 program at Eastern Illinois Univ.
11 Report of K-6 trip
12 Develop criteria eval. existing K-6 materials
13 ERIC and library search
14 BOE materials from commercial publishers
15 NAd Committee meeting
16 NAd Comm. field sites
17 Data review of Nat. BOE Cur. Dev. meeting
18 Visit Home-Ec Lab at Fargo
19 Visit Agri-Business Lab & Center Voc. Tech. Educ.
20 Visit AIR Lab
21 Submit 1st qtrly prog. rept.
22 Review relevant curr. mats.
23 Identify missing curr. guides
24 Report procedures used to review curriculum materials
25 Complete concept paper on role of BOE occup. in U.S.
26 BIER Committee orientation
27 DOT groups curricula dev. for
28 BIER meeting
29 List of missing modules
30 Perf. objectives for modules
31 Concept presented at regional USOE meeting
32 Update curr. mats. that survived screening process
33 Submit quarterly report
34 Two-week workshop of 7-9 grade teachers for module dev.
35 Submit quarterly report
36 Two-week workshop of 7-9 grade teachers for teacher guide development
37 Complete pilot module and teaching guides development
38 Progress report on project to Colo. Voc. Assn. meeting
39 Prog. rept. to NAd Committee
40 Submit quarterly report
41 Test of updated curr. modules
42 Complete classroom testing
43 Submit quarterly report
44 Revise tested modules
45 Prog. report to Nat. Bus. Ed. Assn. meeting
46 Complete curr. module testing
47 Submit quarterly report
48 Complete final modifications of curriculum modules
49 BIER Committee given results

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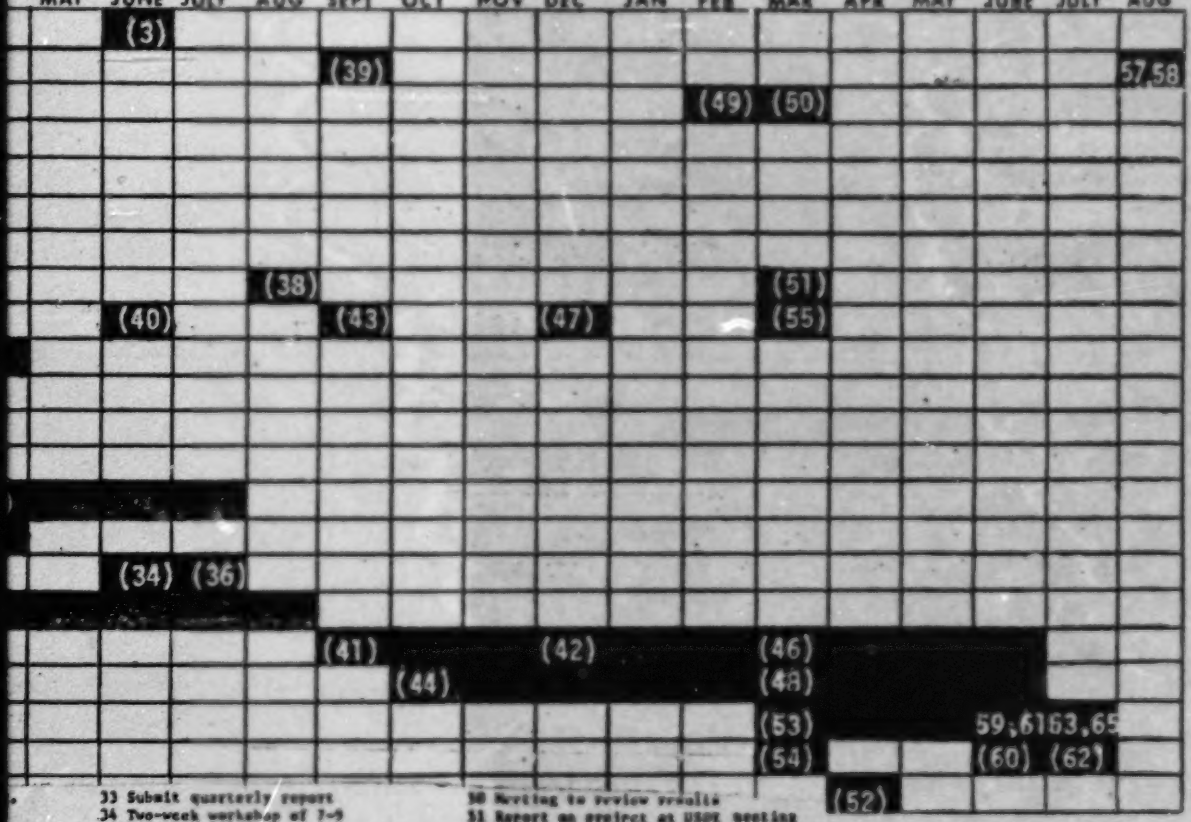
guides, reports, and

t will be discussed

BO-CEC

PROGRESSION CHART



33 Submit quarterly report
34 Two-week workshop of 7-9 grade teachers for module dev.
35 Submit quarterly report
36 Two-week workshop of 7-9 grade teachers for teacher guide development
37 Complete pilot module and teaching guides development
38 Progress report on project to Colo. Voc. Assn. meeting
39 Prog. rept. to NAd Committee
40 Submit quarterly report
41 Test of updated curr. modules
42 Complete classroom testing
43 Submit quarterly report
44 Revise tested modules
45 Prog. report to Nat. Bus. Ed. Assn. meeting
46 Complete curr. module testing
47 Submit quarterly report
48 Complete final modifications of curriculum modules
49 BIER Committee given results
50 Meeting to review results
51 Report on project at USOE meeting
52 Reproduce curriculum guides
53 Complete recruitment of teachers
54 Meet with project officer
55 Submit last quarterly report
56 Abstract of project findings to BIER
57 Submit modules to NAd Committee
58 NAd Committee meeting
59 National Career Edu. Curr. Development workshop
60 Technical report to project offer.
61 National Career Edu. Curr. Development workshop
62 Obtain approval of report and modules from project officer
63 National Career Edu. Curr. Development workshop
64 Abstract of project findings to NAd
65 National Career Educ. workshop
66 Publish final report
67 Dissemination at '75 AVA meeting

.0

Throughout the course of the project many outside resources were utilized. A list of these resources appears in Illustration 4.

Illustration 4

Published Products Of The BO-CEC Project

The following publications are products of the BO-CEC Project:

- Planning for New Designs for Business and Office Education: K-14 Concept Paper. 25 pp.
- Teacher Materials

  Elementary Level: Elementary Resource Guide. 215 pp.

  Junior High Level: English Resource Guide. 311 pp.
  Math Resource Guide. 288 pp.
  Social Studies Resource Guide. 283 pp.
  Business and Office Careers Course Guide. 313 pp.
- The Business and Office Career Education Curriculum Project: Secondary/Post-Secondary Component. 53 pp.
- Final Report

Evaluation

The junior high level materials listed above were tested in eight sites across the nation (see p.11). The participating teachers in these test sites submitted a written evaluation for every BO-CEC unit they used.

Also, they administered pre-tests and posttests to students in the classes with which they used the BO-CEC materials. The purpose of the pre- and posttests was to measure changes in students' knowledge about and interest in business and office occupations. The teachers also administered student reaction sheets on which students evaluated the BO-CEC student materials in terms of whether they think the materials are motivating, enjoyable, comprehensive, clearly written, and so forth.

The results of the evaluation are reported on pages 23-37.

Conclusions And Recommendations

As a result of the evaluation of the BO-CEC materials, the following conclusions are drawn:

1. The BO-CEC materials are generally well-received by both teachers and students. Furthermore, administrators support the use of these materials.
2. The fusion approach to career education is a viable method of providing career education in a way that shows students the relevance of academic subjects to real-life situations.
3. The BO-CEC materials have the potential of significantly increasing students' knowledge about business and office careers.

The tested materials were disseminated to business and office supervisors of the fifty states who participated in the BO-CEC National Dissemination Conference on July 15-16, 1975. The final session at the dissemination conference was devoted to a "group-within-a-group" discussion of the BO-CEC project and products. The supervisors who participated in this discussion unanimously concluded that the BO-CEC materials make an

excellent contribution to career education and will be widely used by teachers in their respective states.

The BO-CEC Project staff recommends that:

1. the BO-CEC materials be further tested in local school districts throughout the nation.
2. teachers who use the BO-CEC materials tailor the materials to fit their course objectives, modifying units or developing new units as needed.
3. local districts develop their own master plans for implementing career education and incorporate the BO-CEC materials into their plan.
4. a national project be funded to develop fusion guides similar to the BO-CEC guides for all vocational clusters and that a master plan for the integration of these plans be developed.
5. publishers use the BO-CEC guides as a point of reference when revising academic textbooks and workbooks so that career education will become fused throughout the curriculum.
6. teacher educators and supervisors offer in-service training programs to assist teachers in utilizing, adapting, and modifying the BO-CEC materials to fit their programs and objectives.

BUSINESS AND OFFICE CAREER EDUCATION CURRICULUM PROJECT

Final Report

Project Concept Paper

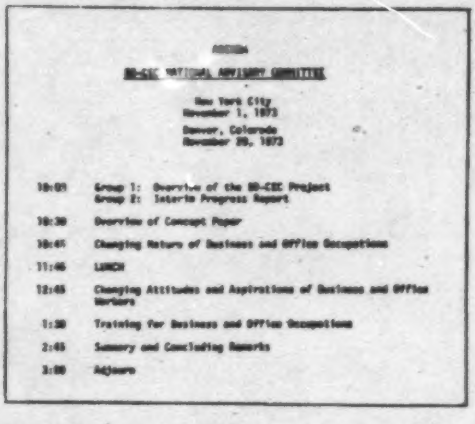
The role and changing nature of business and office occupations in American society and curriculum changes and decisions that might or should result from this changing role were examined in this paper according to the requirements of the USOE contract.

The concept paper was written by project staff after a careful review of current business professional periodicals and current business education literature. The paper, entitled "Planning For New Designs For Business and Office Education: K-14," is included in Appendix A. This concept paper includes four sections: Section 1, Employment Outlook; Section 2: Factors Affecting Business and Office Occupations; Section 3: The Business and Office Education Curriculum; and, Section 4: Business and Office Career Education Curriculum Project. The concept paper was disseminated to leading business and office educators and to business people for their recommendations and advice. After receiving their feedback, the project staff revised the concept paper and disseminated it at national conventions, such as the national convention of the American Vocational Association in Atlanta, the National Business Education Association convention in Chicago, and the Delta Pi Epsilon National Research Planning Meeting in Indianapolis.

Concurrently with the development of the concept paper, project staff reviewed, analyzed, and classified materials received from other current

education curriculum projects, from business and office supervisors of the various states and large cities, and from state directors of vocational education to determine the type of career education curriculum guides needed for business and office education. While the project staff members were reviewing these publications and materials, Dr. Huffman held a preliminary meeting of the national advisory committee members from the eastern states on November 1, 1973, in New York City, and one for commitee members from the mid-western and western states in Denver on November 20, 1973. A preliminary copy of the concept paper was presented to the committee members for their reactions and recommendations for revisions. An agenda with the discussion topics from the New York and Denver meetings of the committee appears in Illustration 5.

Illustration 5



AGENDA

BO-CEC NATIONAL ADVISORY COMMITTEE

New York City
November 1, 1973
Denver, Colorado
November 20, 1973

10:00	Group 1: Overview of the BO-CEC Project Group 2: Interim Progress Report
10:30	Overview of Concept Paper
10:45	Changing Nature of Business and Office Occupations
11:45	LUNCH
12:45	Changing Attitudes and Aspirations of Business and Office Workers
1:30	Training for Business and Office Occupations
2:45	Summary and Concluding Remarks
3:00	Adjourn

Dr. Huffman met with the National Council of Delta Pi Epsilon, which represents sixty national universities, at their bi-annual session in Indianapolis. At this meeting the Delta Pi Epsilon council adopted the following five proposals presented by Dr. Huffman: (1) That the president of Delta Pi Epsilon receive approval and support of the organization as a vital member of the BO-CEC National Advisory Committee; (2) that Delta Pi Epsilon should become a liason group with the BO-CEC Project,

assisting in establishing priorities and in delimiting the scope of the project; (3) that individual chapters should consider developing career education projects, using the BO-CEC staff as a consulting and coordination source for their efforts; (4) that the national office of Delta Pi Epsilon should provide a communication network through its publications as the BO-CEC Project develops so that there is opportunity for constructive criticism, reaction, input, and feedback from Delta Pi Epsilon chapters; and (5) that chapters of Delta Pi Epsilon should be involved in planning and developing the evaluation of the BO-CEC Project.

Preliminary Format For The Curriculum Guides

During November and December, the project staff developed alternative formats for the career education curriculum guides for grades 7-9. Detailed examples of the formats were prepared for presentation at a January meeting of the national advisory committee held in Chicago, Illinois. The meeting will be discussed further in this report.

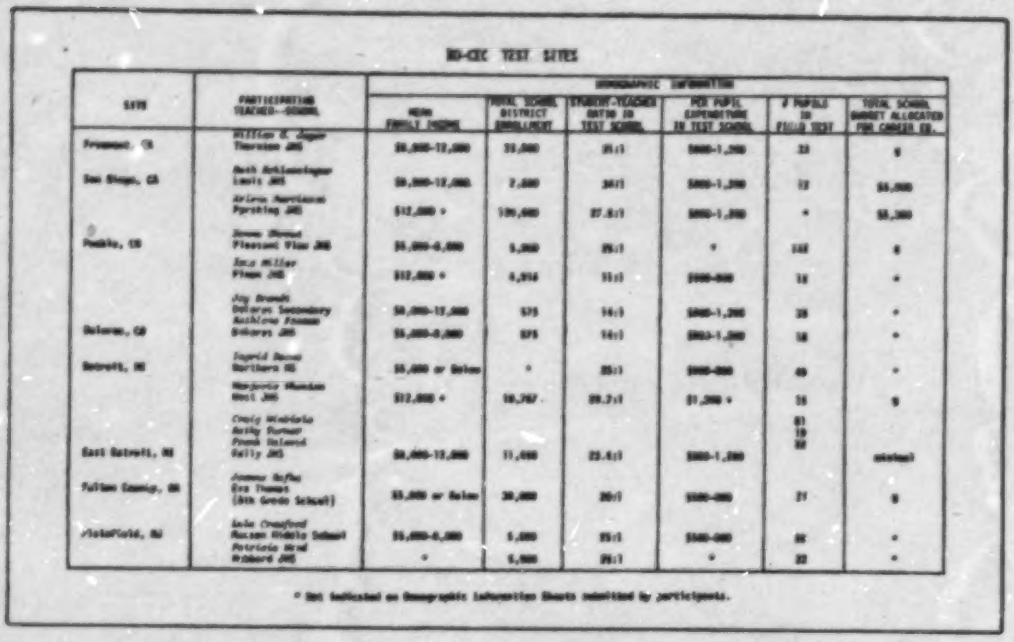
Establishment Of Test Sites

The identification and establishment of test sites began in November. Ultimately, test sites were established in Fremont, California; San Diego, California; Pueblo, Colorado; Dolores, Colorado; Detroit, Michigan; East Detroit, Michigan; Fulton County, Georgia; and Plainfield, New Jersey. The names of the participating teachers, their schools and demographic information appears in Illustration 6.

The test site negotiations continued from November, 1973, through March, 1974. Several other school systems around the country (e.g. Fort Collins, Colorado; New Orleans, Louisiana; and Sidney, Nebraska) also experimented with BO-CEC materials. They did so of their own initiative and at their own expense, supplied only with master copies of the resource

guides. Therefore, they were not required to submit the type of data required from official test sites.

Illustration 6



BO-CEC TEST SITES

SITE	PARTICIPATING TEACHER--SCHOOL	DEMOGRAPHIC INFORMATION					
		MEAN FAMILY INCOME	TOTAL SCHOOL DISTRICT ENROLLMENT	STUDENT-TEACHER RATIO IN TEST SCHOOL	PER PUPIL EXPENDITURE IN TEST SCHOOL	# PUPILS IN FIELD TEST	TOTAL SCHOOL BUDGET ALLOCATED FOR CAREER ED.
Fremont, CA	William H. Zeigler Thurston JHS	$8,500-12,000	33,000	25:1	$800-1,200	33	0
San Diego, CA	Ruth Ashlenbaugh Lewis JHS	$8,500-12,000	7,000	24:1	$800-1,200	12	$8,000
	Arlene Hartmann Pershing JHS	$12,000 +	109,000	27.8:1	$850-1,050	*	$8,000
Pueblo, CO	Donna Shenal Pleasant View JHS	$5,000-8,000	5,000	25:1	*	102	0
	Jack Miller Pfeen JHS	$12,000 +	4,914	11:1	$900-000	12	*
	Jay Brandt Delores Secondary Kathleen Fenner	$8,000-12,000	575	14:1	$800-1,200	20	*
Delores, CO	Delores JHS	$5,000-8,000	575	14:1	$850-1,200	18	*
Detroit, MI	Ingrid Bauer Northern HS	$5,000 or Below	*	25:1	$900-000	40	*
	Marjorie Munson Hoot JHS	$12,000 +	18,767	28.2:1	$1,200 +	15	0
	Craig Hinkhole Kathy Turner Pamela Dalland Kelly JHS	$8,000-12,000	11,000	23.4:1	$800-1,200	61 19 50	minimal
Fulton County, GA	Joanne Rufin Eva Thomas (6th Grade School)	$5,000 or Below	30,000	30:1	$500-000	21	0
Abbeville, SC	Lois Crawford Ruscon Middle School Patricia Hord Hibbard JHS	$5,000-8,000	5,000	25:1	$500-000	32	*
		*	5,000	25:1	*	22	*

* Not indicated on Demographic Information Sheets submitted by participants.

First National Advisory Committee Meeting

The National Advisory Committee for the BO-CEC Project met for the first time as a unified group in Chicago on January 21-23, 1974, to provide the BO-CEC staff with advice and direction for the project. Seventeen representatives from professional education groups, fifteen representatives from major business and industry organizations, six representatives from youth organizations, and five BO-CEC staff members attended this meeting. During the meeting the objectives of the project were explained and an outline of the proposed content and format of the curriculum guides for grades 7-9 were presented to the advisory group for their reactions, recommendations, and suggestions.

Also during the course of the national advisory committee meeting, Dr. Kingston, director of The National Symposium for Business and Office

Education Curriculum Guidelines, reported on the outcome of the symposium. The implications of these outcomes for the BO-CEC Project were discussed by the national advisory committee. The committee recommended that the fusion approach (that is, an approach incorporating career education into existing courses) be used in the BO-CEC Project because it is a sound and logical approach. Also, the committee recommended that effective evaluation and dissemination procedures be built into the project and that a maximum amount of field testing be performed.

Finally, during the course of the meeting, the national committee worked in task force groups to develop career education concepts that they recommended be incorporated into the BO-CEC curriculum guides. Each task force also provided a suggested list of attitudes, work habits, and human relations skills for inclusion in the BO-CEC Project. The agenda, a list of participants, and a report on this BO-CEC National Advisory Committee Meeting appear in Appendix B.

Model Curriculum Guide Unit Developed

After the national advisory committee meeting, the BO-CEC staff began developing the curriculum guides for grades 7-9. Since the fusion approach was to be used, the first task of the BO-CEC staff was to identify the basic, common objectives in junior high academic subjects, such as, English, mathematics, and social studies. After the basic common objectives were identified, Dr. Welter developed a model unit for the English curriculum guide. The unit was developed around the occupation of secretary and around the English objective of teaching nouns and promouns. The unit consisted of a six page student simulation in which students are asked to perform tasks that might typically be performed by a secretary and which require the correct use of nouns and pronouns. The model unit also contained a teacher's key, a background information sheet on the occupation of secretary, and a

statement of purpose and procedures for use by the teacher. The model unit was presented to other members of the project staff and to English teachers and other career education people for review. It was revised based upon recommendations made by the various reviewers. The consensus was that the unit provided a workable format for fusing career education and English instruction in grades 7-9. Therefore it was accepted as a working model for the development of the English and math guides.

The project staff formed into two working groups. One group was assigned the task of developing units for the English Resource Guide (the staff decided to call the curriculum guides Resource Guides), and the other group worked on the Math Resource Guide. Because one recommendation of the BO-CEC National Advisory Committee was that a wide variety of examples should be drawn from business and office work situations, members of the staff interviewed business men and women in the Fort Collins and Denver communities. Data was obtained on work tasks, job situations, and on lifestyles associated with the occupations to be portrayed in the resource guide. The development of the English and Math Resource Guides occupied the full time efforts of the staff from January through June, 1974.

During this period, a Social Studies Resource Guide was also being developed by Dr. Huffman and other personnel working on a contract basis. The social studies guide was uniquely organized since the objectives in social studies are not as clear cut as in English and math, and because social studies includes several different types of courses, such as, government, history, civics, and geography. Therefore, the Social Studies Resource Guide had to contain units which could be used in a variety of courses and for the accomplishment of various objectives. The guide that was developed during this period contained readings from the Wall Street Journal,

selections from the book, Working by Studs Turkel, a city council simulation, and others.

Teachers from the test sites were scheduled to attend a workshop in July, 1974, to learn to use the resource guides. Therefore, the deadlines for completing the test copies of these three resource guides was June, 1974. The guides were completed on schedule.

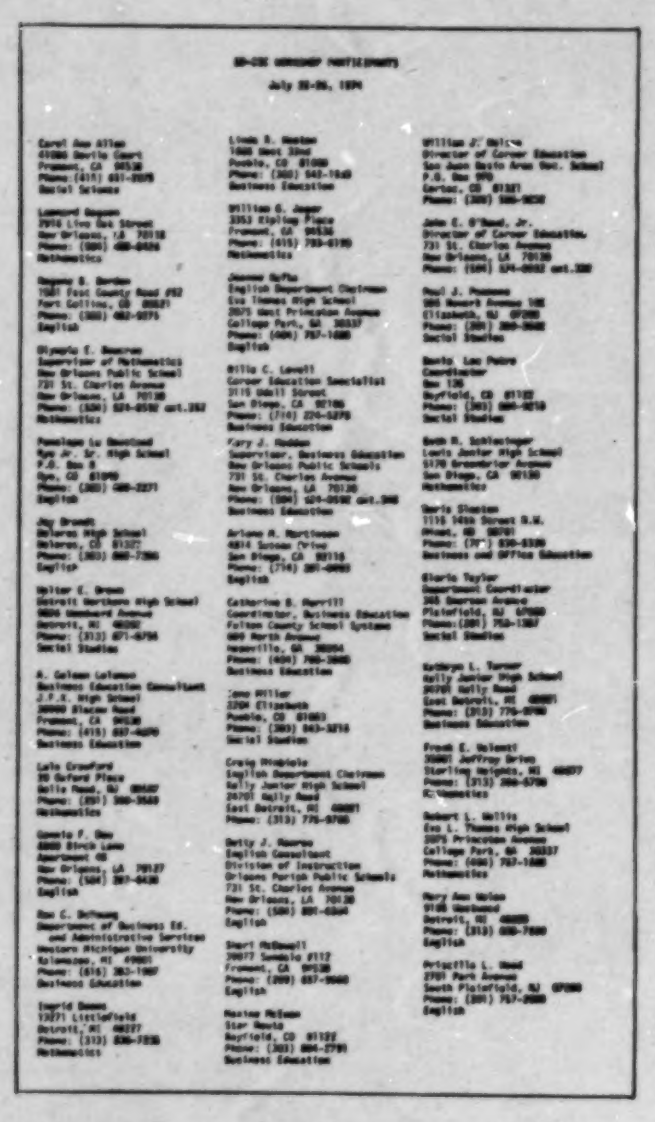
Development Of The Elementary Resource Guide

Dr. Marla Peterson assisted by Ms. Patricia Doll, an elementary school teacher in the Fort Collins school system, developed the Elementary Resource Guide during the months of June and July. Preliminary work had been done during the previous three months by a member of Dr. Peterson's staff at Eastern Illinois University. This preliminary work consisted of review and selection of excerpts from various textbooks used in elementary math, English, social studies, and science courses. The task that Dr. Peterson and Ms. Doll undertook was to review these materials and to select and develop sample ways of infusing career education concepts into the elementary curriculum. Seven major concepts and numerous sub-concepts were illustrated throughout the guide at six grade levels. In the area of language arts, examples of ways that career education concepts could be infused were given for grade levels 1, 3, and 5. In mathematics, examples were given for levels 2, 4, and 6; in science, examples were given for levels 2, 4, and 6; and in social studies, for levels 1, 3, and 5. The final section of the Elementary Resource Guide illustrates how a specific vocational area, in this instance business and office education, can serve as a focus in developing general career concepts. A copy of the Elementary Resource Guide is contained in Appendix C of this report.

Workshop For Test Site Teachers And Coordinators

A workshop was held at Colorado State University in Fort Collins on July 22-26, 1974, for the teachers who would participate in testing the BO-CEC materials and for local educational agency personnel who would coordinate the efforts at the test sites. A list of the workshop participants is shown in Illustration 7.

Illustration 7



During this workshop, the teachers who intended to use the materials reviewed in detail all units in the resource guides which they would be using during the test period. The English, math, and social studies teachers worked in groups determined by their subject areas. Each group had a workshop coordinator who discussed the specific units in the respective guides and who took notes on the teachers' comments and suggestions for revisions. The test site teachers developed their individual plans for incorporating the materials into their regular classroom instruction.

Also, during the workshop, the participating teachers made plans for pre-testing and posttesting their students to objectively determine whether the BO-CEC materials resulted in changes in their career education knowledges and attitudes.

During the workshop each teacher agreed to test the materials in at least one of their classes, and the project director offered to provide each teacher with enough student materials for one class consisting of thirty students. In return, the teachers agreed to provide on-site written evaluations of the materials and to submit their pre-test/posttest results to the project.

Revision Of BO-CEC Resource Guides

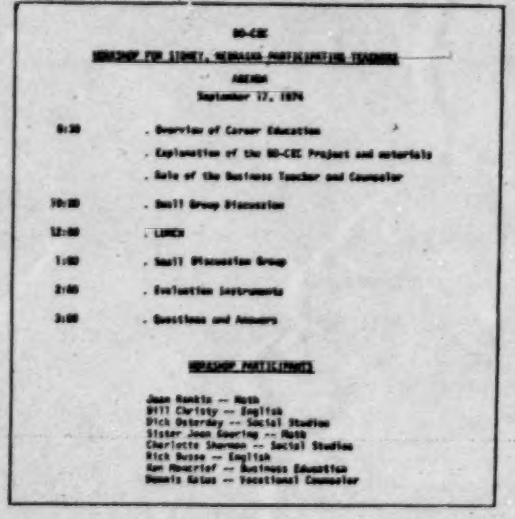
After the workshop, the resource guides were revised in accordance with the suggestions from the teachers and coordinators who participated. After the revisions were completed, the guides were duplicated and sent to the respective cooperating business teachers. Along with the revised guides, unit evaluation sheets were sent to teachers to use in their evaluations of each unit. Also, reminders were sent to the cooperating teachers to provide the project with pre-test data they collected prior to the use of the BO-CEC materials.

Although the materials were revised as a result of the recommendations made during the workshop, some revisions were rather complex and could not be made in the materials sent out in September. Therefore, beginning in September, additional revisions were made to the BO-CEC guides and some additional units were developed. As soon as these units were revised or completed, they were sent to teachers for tryout at the test sites. Copies of the completed English, Math, and Social Studies Resource Guides are contained in Appendices D, E and F of this report.

Special Workshop For Sidney, Nebraska Test Site Teachers

Sidney, Nebraska, was added as a test site and a special one day workshop was held in Fort Collins on September 17, 1974 for the participating Sidney teachers. At this workshop, as in the July workshop, teachers were divided into groups according to their subject areas and a workshop director worked with each group to familiarize them with the resource guides. Teachers were given copies of the resource guides and the Sidney career education director agreed to provide the teachers with the number of copies of student materials needed for testing. The career education director also agreed to provide pre-test and posttest data to help determine the effectiveness of these materials. The agenda and list of participants of this workshop appear in Illustration 8.

Illustration 8



BO-CEC

[redacted]

AGENDA

September 17, 1974

8:30 . Overview of Career Education
. Explanation of the BO-CEC Project and materials
. Role of the Business Teacher and Counselor

10:00 . Small Group Discussion

12:00 . LUNCH

1:00 . Small Discussion Group

2:00 . Evaluation Instruments

3:00 . Questions and Answers

[redacted]

Joan Hankin -- Math
Bill Christy -- English
Dick Osterday -- Social Studies
Sister Joan Goering -- Math
Charlotte Sherman -- Social Studies
Rick Busse -- English
Ken Moeritz -- Business Education
Dennis Gates -- Vocational Counselor

Test Site Visitations

During the course of the school year, the BO-CEC director visited test sites in Detroit, Michigan and Dr. Welter visited test sites in California to determine the extent and effectiveness of the use of the BO-CEC materials. Also, Dr. Robert Ristau of Eastern Michigan University visited schools in east Detroit, talked with teachers participating in the BO-CEC Project, and observed their use of the BO-CEC materials. Dr. Ristau provided the project with observation and evaluation reports on the the test site in east Detroit. The testing activities at other sites were supervised by the business education coordinators who attended the July workshop.

Second Annual National Advisory Committee Meeting

In January, 1975, the total group of the national advisory committee for the project met in Denver to review the progress of the project and to provide recommendations for the continued efforts of the project staff. Prior to this meeting, copies of the resource guides and a statement of work were sent to the advisory committee members. At this second annual meeting of the advisory committee, the members expressed approval of the resource guides and recommended that these guides be widely disseminated as soon as possible.

Under the provisions of the project contract with USOE, a bibliography was to be prepared as the secondary/post-secondary component of the project. However, the advisory committee members recommended that rather than prepare such a bibliography, the project would better serve the business education community by preparing a list of publishers and professional organizations from which teachers might obtain career preparation materials. Since the national advisory committee recommended that such a list of

materials sources be developed rather than a quickly outdated bibliography, the project monitor supported the substitution.

The agenda, a list of participants, and a report on this BO-CEC National Advisory Committee meeting appear in Appendix B of this report.

Dissemination Proposal Developed

In response to USOE requests for proposals in the area of career education, the project staff developed a proposal for working with local school districts in developing and implementing total career education programs. The purpose behind this proposal was to help develop exemplary projects through which the BO-CEC material would be demonstrated and disseminated. Under this proposal, local educational agency demonstration sites would be established in Detroit public schools; Fremont Unified School District; Fulton County school system in Georgia; School District number 70 in Colorado, Sidney public schools in Sidney, Nebraska; Plainfield, New Jersey public schools; and San Diego Unified School District in California. The major project objectives under the proposal were to demonstrate an operational career education model for local educational agency use and for exemplary purposes and to test the potential of the model for making incremental changes in career education programs and in school districts throughout the nation. The BO-CEC materials would have provided a model from which teachers in the local educational agencies could have worked if this proposal had been funded. Ultimately, the proposal was not funded; however, the local educational agencies named in the proposal were told that they could use procedures and materials described in the proposal to develop their own exemplary programs. The dissemination proposal is contained in Appendix G of this report.

Business Careers Course Guide Prepared

During the course of the project, business teachers throughout the nation had requested materials to use in business careers courses at the junior high level. Under the terms of the project contract the statement of work of the project staff was to develop fusion guides. Therefore, no such careers course guide had been developed. However, to meet the needs of these teachers, the project staff selected sixteen units from the English and Math Resource Guides and revised these units so that they could be used in a business careers course or in that section of a general careers course which deals with business and office occupations. The units selected were revised to de-emphasize the math and English topics and to emphasize the nature and varied duties of the occupations depicted in the units. The Business and Office Careers Course Guide consists of five sections. Section 1 includes the clerical occupations; Section 2, the secretarial stenographic occupations; Section 3, accounting and data processing occupations; Section 4, business ownership and professional occupations; and Section 5, pre-employment problems, such as writing letters of applications and preparing resumes. This course guide was completed in June, 1975, and appears in Appendix H of this report.

Secondary/Post-Secondary Component

In accordance with the national advisory committee recommendations made at the January, 1975, national meeting a secondary/post-secondary component was prepared which includes a list of sources of business and office career preparation materials. The sources include forty publishers of career preparation textbooks and reference books and numerous business and professional organizations that might provide teachers with career preparation information and materials. Also included in The Secondary/ Post-Secondary Component is a revised copy of the concept paper which was

prepared at the beginning of the project. Also, five articles describing ways in which secondary and post-secondary business teachers can promote career development were included in this publication. These articles had been prepared for the BO-CEC Project by leading business educators and the articles were previously published in the April, 1975, issue of the "Business Education Forum." The Secondary/Post-Secondary Component also included an article entitled, "Prepare For Tomorrow," written by Frederick Antil, vice president of Life Management Association and a member of the national advisory committee for the project. The Secondary/Post-Secondary Component was completed in June, 1975, and appears in Appendix I of this report.

National Dissemination Of BO-CEC Materials

On July 15-16, 1975, a meeting was held in Denver to disseminate the BO-CEC materials to the business and office supervisors of the fifty states and to other interested participants. At this meeting, the BO-CEC staff presented the Resource Guides, teacher-users described their experiences in using the guides, and the project monitor, James Wykle, discussed sequential planning of career education. Gilbert Stevens of Douglas Aircraft Company, a national advisory committee member, discussed the need for cooperation between industry and educators and recommended some ways in which this cooperation could be instituted. Also, James Mayo, director of career education for the Fremont-Newark regional occupational programs in California, described the career education effort in Irvington School District. Other leading speaker-participants at this meeting included Robert Ristau of Eastern Michigan University, Carmela Kingston of Trenton State College, O. J. Byrnside, the executive director of The National Business Education Association, and William Reynolds, the director for The National Network for Curriculum Coordination for Vocational and Technical Education.

Questionnaires were distributed to state supervisors asking them to indicate new and innovative programs in their states which reflect the changes in technology and changing social conditions in business and industry. Results of this survey and a similar survey by mail will be published in a special report by the National Association of Secondary School Principals.

The agenda for the national dissemination conference, a list of participants, the speeches presented at the meetings, reaction letters from the conference participants, a report on the final session of the conference, and a copy of the aforementioned questionnaire appear in Appendix B of this report.

SUMMARY OF EVALUATION PROCEDURES

Final Report

A pre-test/posttest comparison group design was used to evaluate the changes in students' knowledge about and attitudes toward business careers as a result of exposure to the BO-CEC materials.

Two evaluation instruments were administered to students in the math and English treatment groups both before and after the groups were exposed to the BO-CEC materials.

The first instrument is entitled "What Do You Know and Feel About Business and Office Careers." Both the English and math versions of this instrument contain 10 items, each of which requires two responses. Thus, the instrument requires 20 responses. The instrument is designed to measure the respondent's knowledge about and interest in ten different business and office occupations. Although the English and math versions of this instrument are similiar in design, the items are different.

The second instrument, entitled "Name My Job In Business," consists of pictures of young people working at business and office occupations, and the respondents are asked to name each occupation portrayed and list two tasks typically performed in that occupation. The math version of this instrument contains 16 items and requires 48 responses; the English version contains 12 items and requires 36 responses.

An analysis of variance technique was used to analyze the pre- and post-test data, and the results have been plotted to illustrate the findings

graphically. The plots are shown in illustrations which are contained in this section. In cases where the plots for pre-test scores and posttest scores do not touch or overlap, the differences in the pre- and posttest means are statistically significant at the .05 level; in cases where the plots do touch or overlap, the differences are not statistically significant.

The number of BO-CEC units used with each treatment group is reported when the analysis of variance findings are discussed so that the reader can compare the findings for the various groups in terms of the number of units used by each. Generally, one would expect that treatment groups with which a large number of units have been used would be more likely to have statistically significant differences than groups with which only a small number of units have been used.

The final version of the Social Studies Resource Guide was not completed in time for testing during the 1974-75 academic year. However, two teachers tested some of the preliminary social studies materials which were distributed at the July, 1974, BO-CEC Workshop. The pre- and posttest data supplied by these two teachers indicated no significant difference between the students' pre- and posttest scores, and therefore no additional data on social studies test results are reported in this section.

After the posttests were administered, students in the treatment groups were asked to complete a 12-item Student Reaction Sheet on which they evaluated the effectiveness of the BO-CEC materials. The student responses have been analyzed and are reported later in this section.

Findings: Math Treatment Groups

Four mathematics teachers submitted complete sets of student pre- and post test data. The test sites, the number of participating students in each,

and the number of BO-CEC math units used at each of the sites are shown in Illustration 9 below. Demographic information about these test sites is given on page 11 of this report.

Illustration 9
MATH TREATMENT GROUPS

Group	City/State	School	No. of Pupils	No. of Units Used
1	Freemont, CA	Thornton JHS	30	2
2	East Detroit, MI	Kelly JHS	22	5
3	San Diego, CA	Lewis JHS	30	5
4	Detroit, MI	Northern HS	59	14

A plot showing the results of an analysis of variance of the student pre-test/posttest scores on the first evaluation instrument, "What Do You Know and Feel About Business and Office Careers," is shown in Illustration 10 on the next page, and a table showing the analysis of variance data is shown on page 28. The posttest scores are significantly higher than pre-test scores in the case of treatment groups 2 and 4. The teachers of these two groups used 5 and 14 BO-CEC units, respectively.

In Treatment Groups 1 and 3, the difference in pre- and posttest scores are not statistically significant. The teacher of Group 1 used only two BO-CEC units, and this may partially explain the reason the pre/posttest scores for this group did not differ. The teacher of Group 3 used five units.

On the second instrument, "Name My Job In Business," posttest scores did not differ significantly from the pre-test scores in any of the four treatment groups. A plot showing the mean scores is shown in Illustration 11 on page 27.

ILLUSTRATION 10

PRE- AND POSTTEST RESULTS OF MATH TREATMENT GROUPS' RESPONSES TO THE INSTRUMENT: "WHAT DO YOU KNOW AND FEEL ABOUT BUSINESS AND OFFICE CAREERS"

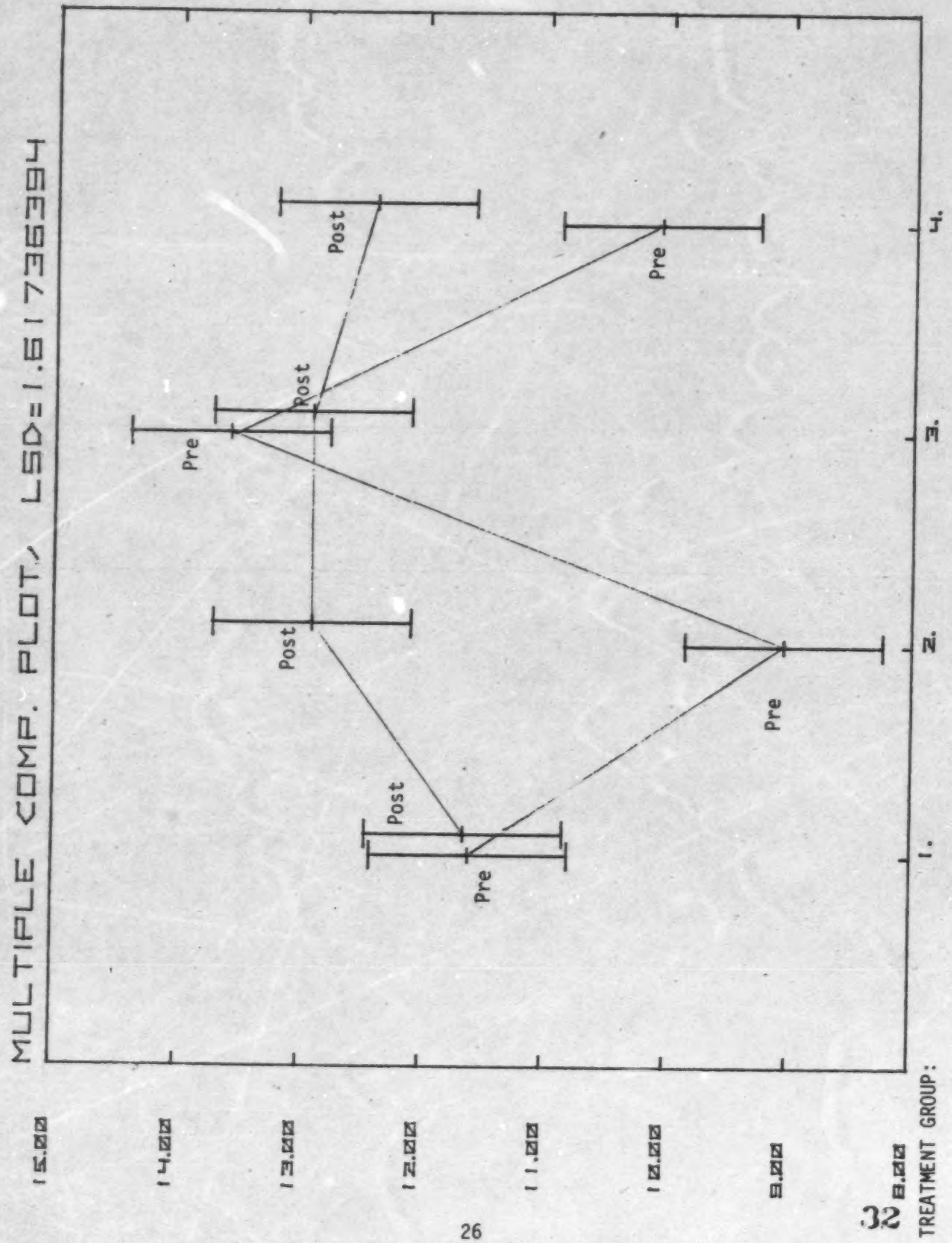


ILLUSTRATION 11

PRE- AND POSTTEST RESULTS OF MATH TREATMENT GROUPS' RESPONSES TO THE INSTRUMENT: "NAME MY JOB IN BUSINESS"

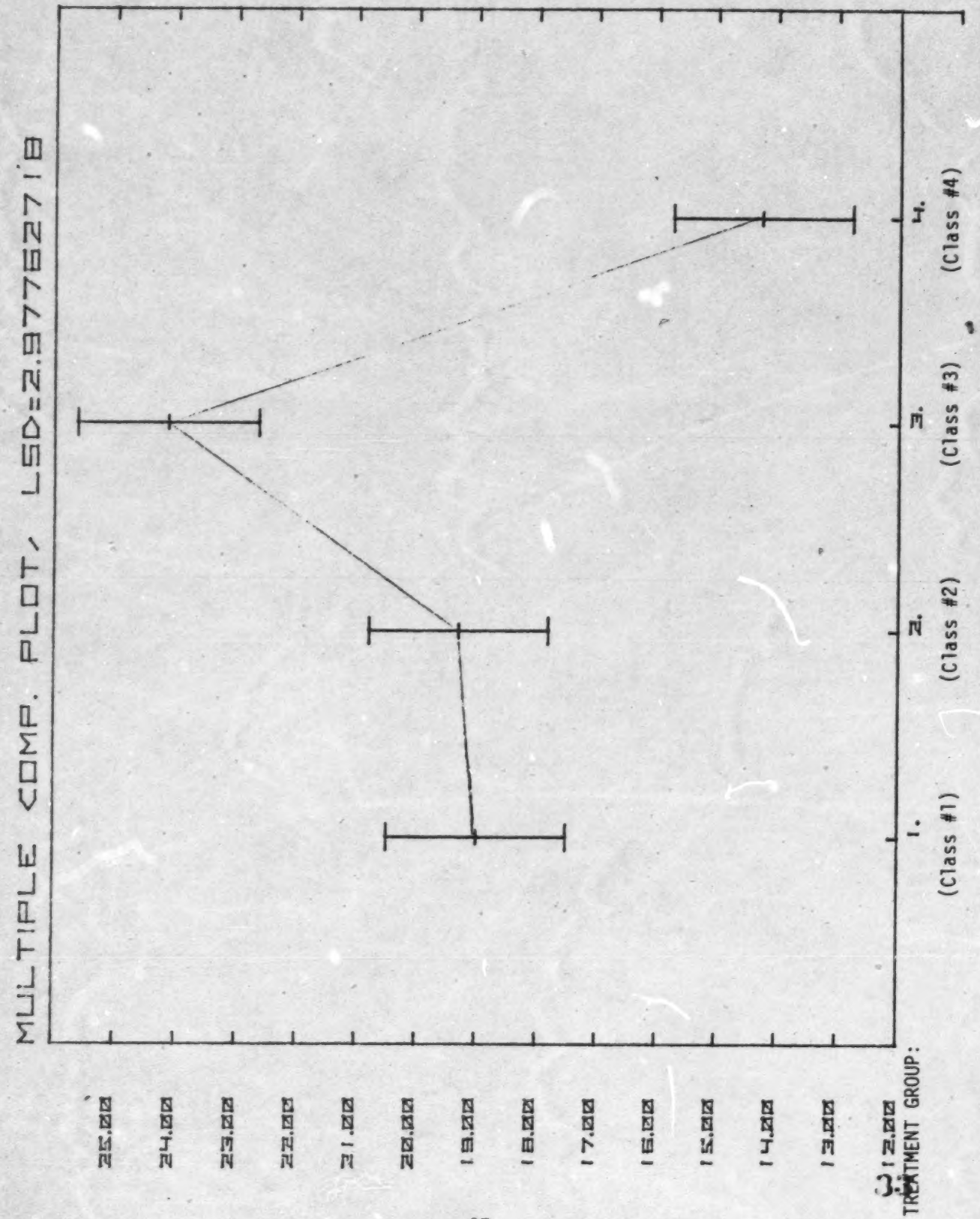


TABLE 1

WHAT DO YOU KNOW AND FEEL ABOUT BUSINESS AND OFFICE CAREERS--MATH
ANOV

Source	df	SS	MS	F	P
Class	3	92.683	30.894	1.933	0.129
Error (2)	102	1630.317	15.984		
Time	1	80.424	80.424	11.611	0.001
Time X Class	3	125.618	41.873	6.045	0.001
Error (b)	102	706.495	6.926		

R1 = 204	2336.812
R2 = 102	706.495
102	1630.317

TABLE 2

NAME MY JOB IN BUSINESS--MATH
ANOV

Source	df	SS	MS	F	P
Class	3	2241.942	747.314	6.523	0.000
Error (a)	101	11571.087	114.565		
Time	1	74.538	78.538	1.797	0.183
Time X Class	3	278.925	92.975	2.241	0.088
Error (b)	101	4189.855	41.484		

R1 = 202	15760.942
R2 = 101	4189.855
101	11571.087

Findings: English Treatment Groups

Five English teachers submitted test data for the English treatment groups, but the data submitted by one teacher was not complete and only a partial analysis could be made for that treatment group. Information about the English treatment groups is given in Illustration 12, and more complete demographic information is given in Illustration 6 on page 11 of this report.

Illustration 12

ENGLISH TREATMENT GROUPS

Group	City/State	School	No. of Pupils	No. of Units Used
1	East Detroit, MI	Kelly JHS	19	4
2	Fulton County, GA	Eva Thomas School	21	8
3	Plainfield, NJ	Hubbard	22	6
4	East Detroit, MI	Kelly JHS	81	10
5*	Pueblo, CO	Pleasant View HS	142	13

*Usable data received on one instrument

A plot showing the results of an analysis of variance of student pre- and posttest scores on one instrument, "What Do You Know and Feel About Business and Office Careers," is shown in Illustration 13, and a table showing the analysis of variance data is shown on page 32. Posttest scores on this instrument are significantly higher than the pre-test scores in the case of Treatment Groups 1, 2, 4, and 5. The difference between the pre- and posttest scores of Treatment Group 3 is not statistically significant.

The plot showing the analysis of variance of student scores on the second instrument, "Name My Job In Business," is shown in Illustration 14 on page 31. (Data from the fifth treatment group were incomplete and could not be analyzed.) Significant differences were found in the pre- and post-test scores of Treatment Groups 1, 2, and 4, but the difference in pre- and posttest scores of Group 3 is not significant.

ILLUSTRATION 13

PRE- AND POSTTEST RESULTS OF ENGLISH TREATMENT GROUPS' RESPONSES TO THE INSTRUMENT: "WHAT DO YOU KNOW AND FEEL ABOUT BUSINESS AND OFFICE CAREERS"

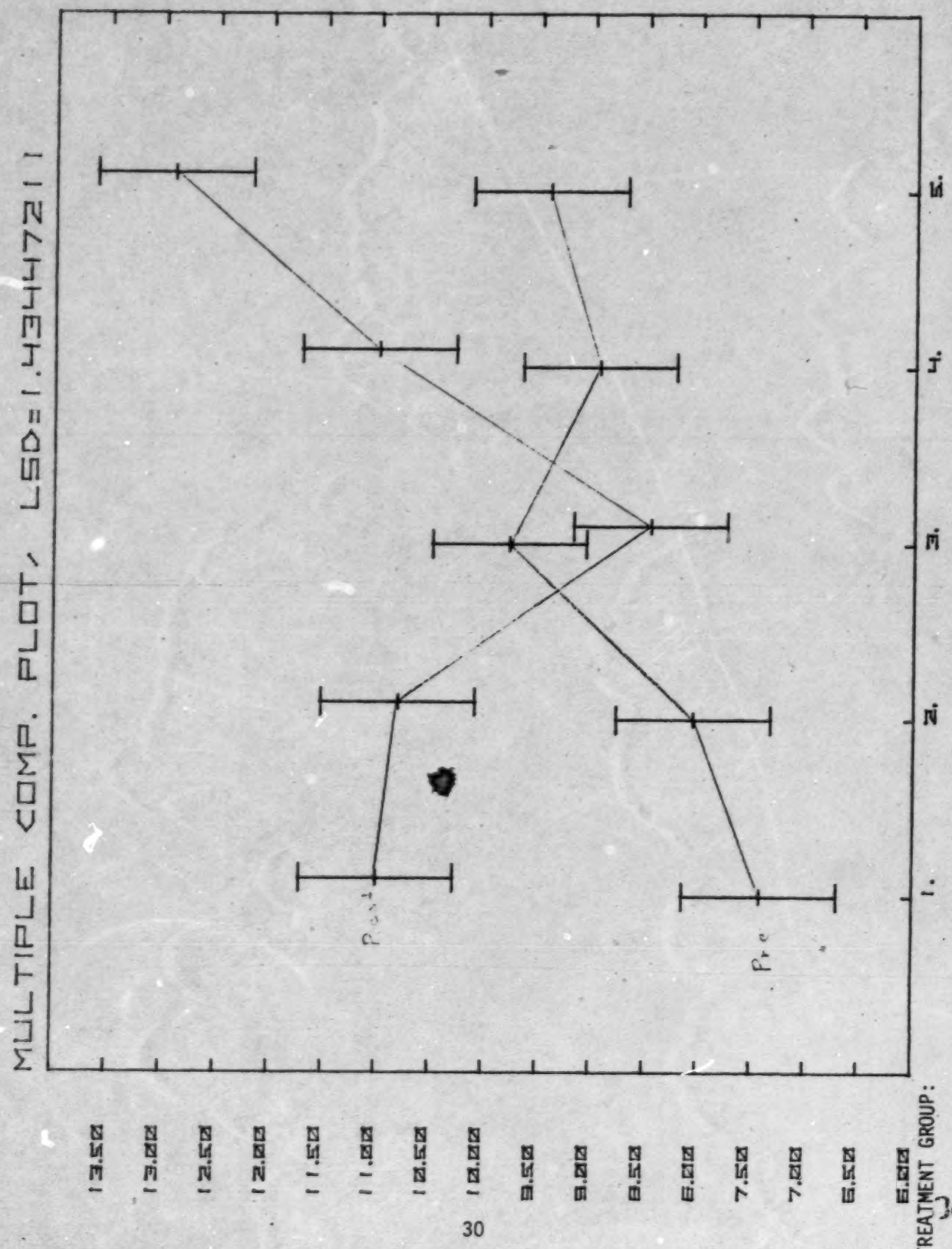


ILLUSTRATION 14

PRE- AND POSTTEST RESULTS OF ENGLISH TREATMENT GROUPS' RESPONSES TO THE INSTRUMENT; "NAME MY JOB IN BUSINESS"

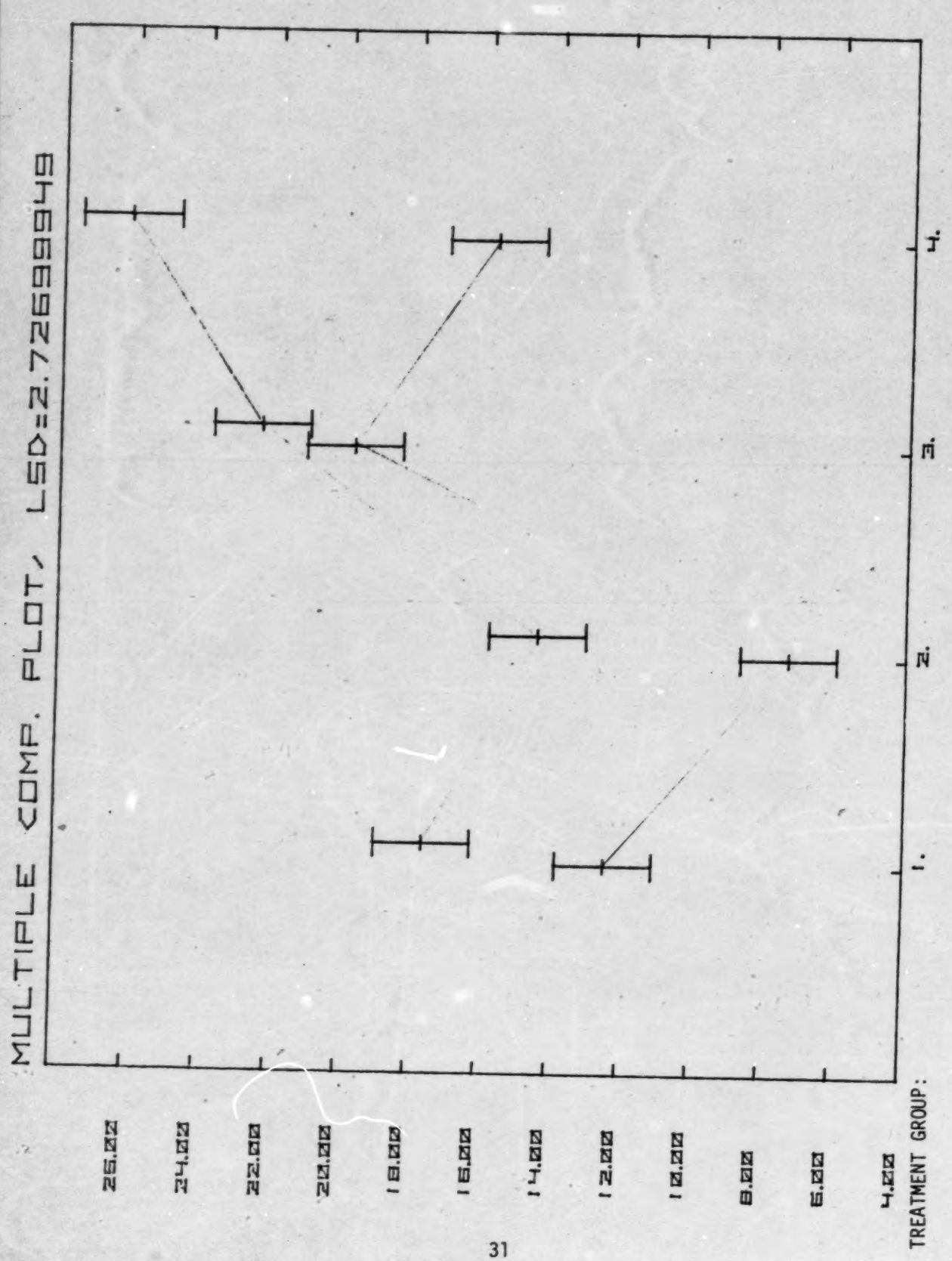


TABLE 3

WHAT DO YOU KNOW AND FEEL ABOUT
BUSINESS AND OFFICE CAREERS--ENGLISH
ANOV

Source	df	SS	MS	F	P
Class	4	357.784	89.446	4.606	0.001
Error (a)	280	5437.016	19.418		
Time	1	338.768	338.768	41.739	0.000
Time X Class	4	245.421	61.355	7.559	0.000
Error (b)	280	2272.571	8.116		

R1 = 560	7709.587
R2 = 280	2272.571
280	5437.016

TABLE 4

NAME MY JOB IN BUSINESS--ENGLISH
ANOV

Source	df	SS	MS	F	P
Class	3	4392.623	1443.208	21.808	0.000
Error (a)	141	9331.122	66.178		
Time	1	2076.809	2076.809	84.256	0.000
Time X Class	3	603.407	201.136	8.160	0.000
Error (b)	141	3475.476	24.649		

R1 = 282	12806.598
R2 = 141	3475.476
141	9331.122

Student Reactions to the BO-CEC Materials

Students in all treatment groups completed reaction sheets at the conclusion of the BO-CEC materials tryout period. The responses of math, English, and social studies students to the 12 items on the reaction sheet are shown in Illustrations 15, 16, and 17 respectively.

Although the primary purpose of the BO-CEC materials is to increase student awareness of business and office careers, the theory behind the fusion approach used in these materials is that this approach will make school seem more relevant to students and that the increased relevance will, in turn, motivate students to do better in their regular classroom work. Sixty per cent of the English students, 50 per cent of the math students, and 47 per cent of the social studies students said the BO-CEC materials did motivate them to do better in class (item 1). Even larger percentages of English, math, and social studies students said that the materials make school more relevant to real life (70, 52, and 63 per cent, respectively--item 3).

While only slightly more than half of all students said that the materials contain enough information to help them make tentative career decisions (item 6), approximately three-fourths of the English students and two-thirds of the math and social studies students reported that the materials do contain enough occupational information (item 5).

The purpose of the BO-CEC guides is not necessarily to cause students to make career decisions at this point in their lives; even so, 72 per cent of the English students, 60 per cent of the math students, and 58 per cent of the social studies students reported that they have a better idea of what they would like to do for a career as a result of the materials (item 8).

The central purpose of the BO-CEC guides is to increase student awareness of careers in business and office occupations. Eighty-three per cent

of both English and math students and 84 per cent of the social studies students reported that they are aware of more business and office occupations as a result of the BO-CEC materials (item 9).

Fifty-nine per cent of the English, 39 per cent of the math, and 26 per cent of the social studies students reported the materials helped them learn more about themselves.

Only a relatively small percentage of English, math, and social studies students found the BO-CEC materials too difficult (11, 17, and 4 per cent, respectively). Sixty-eight per cent of the English students, 48 per cent of the math students, and 37 per cent of the social studies students said they would like to continue using the BO-CEC materials.

Conclusions and Recommendations

The conclusions and recommendations that were drawn from the evaluation are reported on pages 6 and 7 of this report.

ILLUSTRATION 15

STUDENT REACTIONS TO BO-CEC MATERIALS

MATH TREATMENT GROUP

ITEM	Response		
	Percentage Yes	Percentage No	Percentage No Response
1. Did the career education materials motivate you to do better in this class?	50	48	2
2. Did you enjoy these new materials?	59	39	2
3. Did these materials make school more relevant to real life?	52	47	1
4. Do you feel that you made better use of your time by using these materials?	57	41	2
5. Was there enough occupational information presented in these materials?	69	31	0
6. Was there enough information in the materials to help you make tentative career decisions?	51	48	1
7. Did the materials help you learn more about yourself?	39	60	1
8. Do you have a better idea of what you would like to do for a career?	60	35	5
9. Are you now aware of more business and office occupations?	83	15	2
10. Do you feel it is important to know more about different occupations and careers?	88	11	1
11. Do you want to continue using these career education materials?	48	48	4
12. Did you find the materials too difficult?	17	82	1

ILLUSTRATION 16

STUDENT REACTIONS TO BO-CEC MATERIALS

ENGLISH TREATMENT GROUP

ITEM	Response		
	Percentage Yes	Percentage No	Percentage No Response
1. Did the career education materials motivate you to do better in this class?	60	38	2
2. Did you enjoy these new materials?	74	26	0
3. Did these materials make school more relevant to real life?	70	29	1
4. Do you feel that you made better use of your time by using these materials?	73	26	1
5. Was there enough occupational information presented in these materials?	74	25	1
6. Was there enough information in the materials to help you make tentative career decisions?	55	44	1
7. Did the materials help you learn more about yourself?	59	39	2
8. Do you have a better idea of what you would like to do for a career?	72	28	0
9. Are you now aware of more business and office occupations?	83	16	1
10. Do you feel it is important to know more about different occupations and careers?	88	11	1
11. Do you want to continue using these career education materials?	68	31	1
12. Did you find the materials too difficult?	11	89	0

ILLUSTRATION 17

STUDENT REACTIONS TO BO-CEC MATERIALS

SOCIAL STUDIES TREATMENT GROUP

ITEM	Response		
	Percentage Yes	Percentage No	Percentage No Response
1. Did the career education materials motivate you to do better in this class?	47	53	0
2. Did you enjoy these new materials?	63	37	0
3. Did these materials make school more relevant to real life?	63	37	0
4. Do you feel that you made better use of your time by using these materials?	48	48	4
5. Was there enough occupational information presented in these materials?	68	32	0
6. Was there enough information in the materials to help you make tentative career decisions?	63	37	0
7. Did the materials help you learn more about yourself?	26	74	0
8. Do you have a better idea of what you would like to do for a career?	58	42	0
9. Are you now aware of more business and office occupations?	84	16	0
10. Do you feel it is important to know more about different occupations and careers?	96	4	0
11. Do you want to continue using these career education materials?	37	63	0
12. Did you find the materials too difficult?	4	96	0